

## **IMPROVED VIAS FOR MICRO-FLUID EJECTION ASSEMBLIES**

### **Abstract of the Disclosure**

A micro-fluid ejection assembly including a silicon substrate having accurately formed fluid paths therein. The fluid paths are formed by a deep reactive ion etching  
5 process conducted on a substrate having a surface characteristic before etching selected from the group consisting of a dielectric layer thickness of no more than about 5000 Angstroms, and a substantially dielectric material free pitted surface wherein a root mean square depth of surface pitting is less than about 500 Angstroms and a maximum surface pitting depth is no more than about 2500 Angstroms. Fluid paths in such  
10 substrates having improved flow characteristics for more reliable fluid ejection operations.